

CLAIMS:

1. An optical amplifier comprising:
an optical amplifying medium;
an excitation source which excites said optical
amplifying medium; and
at least one of a first monitoring means for monitoring
an amplified multiplexed light from said optical amplifying
medium and a second monitoring means for monitoring a
multiplexed light input to said optical amplifying medium;
wherein an operation amount of said excitation source for
said optical amplifying medium is controlled using a
monitoring result output from at least one of said first and
second monitoring means.